

What is claimed is:

1. An OFDM reception apparatus comprising:

5 FFT processor for performing FFT processing on a reception signal;

a plurality of demodulator capable of performing mutually different demodulation processes on the FFT-processed reception signal; and

10 selector for selecting, among said plurality of demodulator, a demodulator that should perform the demodulation process on said FFT-processed reception signal according to a factor that influences the quality of a demodulated signal and letting the selected demodulator perform the demodulation process.

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2. The OFDM reception apparatus according to claim 1, wherein the selector uses a relationship between the communication speed of one packet and channel variation speed as a factor that influences the quality of the demodulated signal.

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3. The OFDM reception apparatus according to claim 1, wherein the demodulation processes carried out by the plurality of demodulator are coherent detection processing or delay detection processing.

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4. An OFDM transmission apparatus comprising:

modulator for performing modulation processing

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corresponding to demodulation processing performed by an OFDM reception apparatus on a transmission signal; and

IFFT processor for performing IFFT processing on the modulated transmission signal,

said OFDM reception apparatus comprising:

FFT processor for performing FFT processing on a reception signal;

a plurality of demodulator capable of performing mutually different demodulation processes on the FFT-processed reception signal; and

selector for selecting, among said plurality of demodulator, a demodulator that should perform the demodulation process on said FFT-processed reception signal according to factor that influences the quality of a demodulated signal and letting the selected demodulator perform the demodulation process.

5. An OFDM communication apparatus equipped with an OFDM reception apparatus comprising:

FFT processor for performing FFT processing on a reception signal;

a plurality of demodulator capable of performing mutually different demodulation processes on the FFT-processed reception signal; and

selector for selecting, among said plurality of demodulator, a demodulator that should perform the demodulation process on said FFT-processed reception

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signal according to factor that influences the quality of a demodulated signal and letting the selected demodulator perform the demodulation process, and

an OFDM transmission apparatus comprising:

5 modulator for performing modulation processing corresponding to the demodulation processing performed by said OFDM reception apparatus on a transmission signal; and

10 IFFT processor for performing IFFT processing on the modulated transmission signal.

6. A communication terminal apparatus equipped with an OFDM communication apparatus, said OFDM communication apparatus including an OFDM reception apparatus
15 comprising:

FFT processor for performing FFT processing on a reception signal;

20 a plurality of demodulator capable of performing mutually different demodulation processes on the FFT-processed reception signal; and

selector for selecting, among said plurality of demodulator, a demodulator that should perform the demodulation process on said FFT-processed reception signal according to factor that influences the quality
25 of a demodulated signal and letting the selected demodulator perform the demodulation process, and

an OFDM transmission apparatus comprising:

modulator for performing modulation processing

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corresponding to the demodulation processing performed by said OFDM reception apparatus on a transmission signal; and

IFFT processor for performing IFFT processing on
5 the modulated transmission signal.

7. A base station apparatus equipped with an OFDM communication apparatus, said OFDM communication apparatus including an OFDM reception apparatus
10 comprising:

FFT processor for performing FFT processing on a reception signal;

a plurality of demodulator capable of performing mutually different demodulation processes on the
15 FFT-processed reception signal; and

selector for selecting, among said plurality of demodulator, a demodulator that should perform the demodulation process on said FFT-processed reception signal according to factor that influences the quality
20 of a demodulated signal and letting the selected demodulator perform the demodulation process, and

an OFDM transmission apparatus comprising:

modulator for performing modulation processing corresponding to the demodulation processing performed
25 by said OFDM reception apparatus on a transmission signal; and

IFFT processor for performing IFFT processing on the modulated transmission signal.

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8. An OFDM communication method comprising:

the FFT step of performing FFT processing on a reception signal; and

5 the demodulating step of performing, among a plurality of demodulation processes, a demodulation process corresponding to factor that influences the quality of a modulated signal.

10 9. The OFDM communication method according to claim 8, wherein the demodulating step uses a relationship between the communication speed of one packet and channel variation speed as a factor that influences the quality of the demodulates signal.

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